UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,317	01/18/2002	Martin Pelikan	1201.66005	8013

7590 08/15/2005	**EXAMINER**
GREER, BURNS & CRAIN, LTD.	PALADINI, ALBERT WILLIAM
Suite 2500	

300 South Wacker Drive	ART UNIT	PAPER NUMBER
Chicago, IL 60606	2125	

DATE MAILED: 08/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>18 January 2002</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-46</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-46</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date <u>1/27/02</u>.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2.   Claims 1-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1

Lines 7-8 recite "creating a probabilistic model fitting said second set of solutions," The claim does not recite what the "second set of solutions" is fitted to.

Claim 33

Line 7 recites "creating a probabilistic model fitting said second set of solutions," The claim does not recite what the "second set of solutions" is fitted to.

Appropriate correction and clarification are required.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4.   Claims 33-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Patel (6768973).

Patel discloses a method and system for optimizing a solution set for a problem from column 2, line 43 to column 6, line 36; which is depicted in figure 2. During each iteration of the algorithm, solutions are obtained using a portion of the previous solution. Patel teaches on lines 45 to 59 in column 3, the use of a Bayesian network for the probabilistic model as recited in claims 38 and 40. In figure 12, and on lines 33 to 50 in column 10 Patel teaches the use of niching to allow the full front to be covered as recited in claims 33-35, 38, and 44-46.

Allowable Subject Matter

5.   Claim1 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

6.   Claims 2-32 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7.   The following is a statement of reasons for the indication of allowable subject matter: None of the references cited or the art searched disclose or teach alone or in combination the method of optimizing a solution set for a problem recited in claim 1 which includes limitation whereby hierarchically decomposable problems can be modeled, which is described and supported in the specification on pages 16 and 17.

Relevant Prior Art

8.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wang (5963902) discloses a method of using constrained optimization techniques to decrease the size of models used for automatic pattern recognition using three iterations for reduction where a LaGrange multiplier and input constraints are inputted for each iteration.

Masch (5930762) discloses a computer risk management system for a multi-parameter physical system, which sets initial parameter values and utilizes the uncertainty or error bars of each parameter and the constraints or boundary conditions in a feedback algorithmic system until optimum results are achieved using risk limiting constraints.

Fuhrer (5940816) discloses a method of optimization problem solving by choosing a set of <u>solution</u> generators for the specified problem, instantiating the set of <u>solution</u> generators in memory, running in a CPU the set of <u>solution</u> generators for producing a set of candidate <u>solutions</u> relevant to the specified problem, filtering the set of candidate <u>solutions</u> for producing at least one selectable candidate <u>solution</u> in accordance with an independent metric, outputting on a display the at least one selectable candidate <u>solution,</u> and dynamically interacting with the at least one of selectable candidate <u>solutions</u> for generating a refined set of candidate <u>solutions</u> from the at least one selectable candidate <u>solution</u>.

Akkiraju (6490572) discloses an optimization prediction technique for industrial

processes where the optimization problem is broken down into subsets or smaller

optimization elements and where each subset is optimized using known computational

techniques such as linear function analysis.

Cereghini (6615205) discloses an optimization technique for cluster analysis in

relational databases using a mixture probability function and an expectation-

maximization clustering algorithm, which updates mean values, covariance, and weight

values stored in three tables until a specified number of iterations are performed.

9.   Any inquiry concerning this communication or earlier communication from the
examiner should be direct to Albert W. Paladini whose telephone number is (571) 272-
3748. The examiner can normally be reached from 7:00 to 3:00 PM on Monday,
Tuesday, Thursday, and Friday.
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Mr. Leo P. Picard, can be reached on (571) 272-3749. The official fax phone
number for the organization where this application or proceeding is assigned is (703)
872-9306.
        Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is (703) 308-
0956.

August 11, 2005

Albert W. Paladini
Primary Examiner
Art Unit 2125